

--This application is a continuation of co-pending patent application having Serial No. 09/870,044, filed May 29, 2001, which is hereby fully incorporated herein by reference. Benefit of all earlier filing dates is claimed for all common subject matter.-

In the claims:

Please amend the claims as shown below.

Please cancel claims 8-12.

Please add the following claims.

21. (New) A method for providing support to a substrate, the method comprising:

attaching a component to an electrical contact area on a first side of the substrate; and

attaching a pre-curved bolster plate on a second side of the substrate, the pre-curved bolster plate having a pre-calculated radius of curvature prior to attachment to the second side of the substrate.

22. (New) The method of claim 21, wherein the component comprises a land grid array (LGA) component.

23. (New) The method of claim 21, wherein the substrate is selected from a group of substrates consisting of: a

printed circuit board (PCB), a multi-chip module (MCM), and a flexible substrate.

24. (New) The method of claim 21, wherein the pre-curved bolster plate includes a material selected from a group consisting of: a stainless steel alloy, a powder-coated spring steel alloy, a plated spring steel alloy, a painted spring steel alloy, a titanium steel alloy, a carbon steel alloy, a magnesium alloy, and an aluminum alloy.

25. (New) The method of claim 21, wherein the pre-curved bolster plate has a spherical curvature.

26. (New) The method of claim 21, wherein the pre-curved bolster plate has a cylindrical curvature.

27. (New) The method of claim 21, wherein the pre-curved bolster plate has a radius of curvature in excess of approximately 100 inches (254 centimeters).

28. (New) A substrate support assembly produced in accordance with the method of claim 21.

29. (New) An apparatus for providing support to a substrate, the apparatus comprising:

means for attaching a component to an electrical contact area on a first side of the substrate; and

means for attaching a pre-curved bolster plate on a second side of the substrate, the pre-curved bolster plate

having a pre-calculated radius of curvature prior to attachment to the second side of the substrate.

30. (New) An apparatus for providing support to a substrate, the apparatus comprising:

a component coupled to an electrical contact area on a first side of the substrate; and

a pre-curved bolster plate coupled on a second side of the substrate, the pre-curved bolster plate having a pre-calculated radius of curvature prior to attachment to the second side of the substrate.

31. (New) The apparatus of claim 30, wherein the component comprises a land grid array (LGA) component.

32. (New) The apparatus of claim 30, wherein the substrate is selected from a group of substrates consisting of: a printed circuit board (PCB), a multi-chip module (MCM), and a flexible substrate.

33. (New) The apparatus of claim 30, wherein the pre-curved bolster plate includes a material selected from a group consisting of: a stainless steel alloy, a powder-coated spring steel alloy, a plated spring steel alloy, a painted spring steel alloy, a titanium steel alloy, a carbon steel alloy, a magnesium alloy, and an aluminum alloy.

34. (New) The apparatus of claim 30, wherein the pre-curved bolster plate has a spherical curvature.

35. (New) The apparatus of claim 30, wherein the pre-curved bolster plate has a cylindrical curvature.

36. (New) The apparatus of claim 30, wherein the pre-curved bolster plate has a radius of curvature in excess of approximately 100 inches (254 centimeters).

37. (New) A method for coupling a plate member to an electrical packaging assembly, the method comprising:

    providing an electrical packaging assembly;

    disposing a plate member against the electrical packaging assembly;

    flexing the plate member towards the electrical packaging assembly to produce a flexed plate member; and

    coupling the flexed plate member to the electrical packaging assembly.

38. (New) The method of Claim 37 wherein said flexing comprises flexing opposed ends of the plate member towards a substrate of the electrical packaging assembly.

39. (New) The method of Claim 37 wherein said flexing comprises flexing opposed ends of the plate member towards a substrate of the electrical packaging assembly until the plate member is generally flushed against the substrate.

40. (New) The method of Claim 37 wherein said electrical packaging assembly comprises an electrical component having a plurality of leads attached to an electrical contact area of a substrate.

41. (New) The method of Claim 39 wherein said electrical packaging assembly comprises an electrical component having a plurality of leads attached to an electrical contact area of said substrate.

42. (New) The method of Claim 37 wherein said plate member is stamped to achieve a spherical curvature.

43. (New) The method of Claim 41 wherein said plate member is stamped to achieve a spherical curvature.

44. (New) The method of Claim 37, wherein said plate member is fabricated from a material selected from the group of materials consisting of: a stainless steel alloy, a powder-coated spring steel alloy, a plated spring steel alloy, a painted spring steel alloy, a titanium steel alloy, a carbon steel alloy, a magnesium alloy, and an aluminum alloy.

45. (New) The method of Claim 43, wherein said plate member is fabricated from a material selected from the group of materials consisting of: a stainless steel alloy, a powder-coated spring steel alloy, a plated spring steel alloy, a painted spring steel alloy, a titanium steel alloy, a carbon steel alloy, a magnesium alloy, and an aluminum alloy.

46. (New) A method for assembling a bolster plate to a circuit member, the method comprising:

providing a circuit member;  
disposing a bolster plate against the circuit member;  
flexing the bolster plate towards the circuit member  
to produce a flexed bolster plate; and  
coupling the flexed bolster plate to the circuit  
member.

47. (New) The method of Claim 46 wherein said flexing  
comprises flexing opposed ends of the bolster plate towards  
the circuit member.

48. (New) The method of Claim 46 wherein said flexing  
comprises flexing opposed ends of the bolster plate towards  
the circuit member until the bolster plate is generally  
flushed against the circuit member.

49. (New) The method of Claim 46 wherein said circuit  
member includes an electrical contact area having a  
plurality of leads attached thereto.

50. (New) The method of Claim 48 wherein said circuit  
member includes an electrical contact area having a  
plurality of leads attached thereto.

51. (New) The method of Claim 46 wherein said bolster plate  
is stamped to achieve a spherical curvature.

52. (New) The method of Claim 50 wherein said bolster plate  
is stamped to achieve a spherical curvature.

53. (New) The method of Claim 46, wherein said bolster plate is fabricated from a material selected from the group of materials consisting of: a stainless steel alloy, a powder-coated spring steel alloy, a plated spring steel alloy, a painted spring steel alloy, a titanium steel alloy, a carbon steel alloy, a magnesium alloy, and an aluminum alloy.

54. (New) The method of Claim 52, wherein said bolster plate is fabricated from a material selected from the group of materials consisting of: a stainless steel alloy, a powder-coated spring steel alloy, a plated spring steel alloy, a painted spring steel alloy, a titanium steel alloy, a carbon steel alloy, a magnesium alloy, and an aluminum alloy.

55. (New) An assembly produced in accordance with the method of claim 46.

REMARKS/ARGUMENTS

In summary, claims 8-12 are being cancelled and new claims 21-55 are being added in the above-identified application. No new matter is being added by virtue of the amendment to the specification and claims.

Favorable action is respectfully requested.